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**SYSTEM, METHOD, AND SERVICE FOR  
DATATYPE CACHING, RESOLVING, AND ESCALATING  
AN SQL TEMPLATE WITH REFERENCES**

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**ABSTRACT OF THE INVENTION**

The datatype for a SQL template with references is cached, resolved, and escalated, accelerating the processing of the SQL template to fetch the datatype of the SQL template. The SQL template that the user provides for an object is also validated. The datatypes of the direct children of an SQL statement are required to resolve the datatype of the SQL template. Consequently, the datatype of each object with its associated SQL template is placed in cache to leverage its use when referenced by another object. An advantage is that datatype resolution may be performed in constant time since the SQL template remains the same except for the substitution of datatypes for tokens. In addition, the algorithm generating the valid SQL statement used to resolve the datatype is relatively simple, using a simple "search and replace" of tokens with the function "cast(NULL as DATATYPE)". Furthermore, the resulting valid SQL statement is much smaller than that provided by conventional systems. Consequently, the depth of the reference tree analyzed for datatype may be much larger than that analyzed by conventional systems and methods.